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MOLLUSKS FROM NORTHEASTERN MEXICO.

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These shells were collected by Mr. A. A. Hinkley during the past winter, in the state of San Luis Potosi, Mexico. The Panuco river system has proved to be unexpectedly rich in fresh-water mollusks, having a fine group of *Unionidæ*, a remarkable lot of *Pachychili*, a new genus of *Pleuroceratidæ*, a *Gundlachia*, and various interesting *Amnicolidæ*. Among the latter there are several genera unlike any known American forms, and related to genera of the Old World. I have elsewhere called attention to a little snail found by Mr. Hinkley last year, *Coilostele tampicoensis*, which is closely allied to species of Spain, Syria and Arabia, but of a genus not before known in the western world. The two genera following, *Emmericia* and *Pterides*, seem to be similarly allied to European groups, and are certainly quite unlike any other American *Amnicolidæ* yet known.

EMMERICIA.

This genus was established by the late Professor Spiridion Brusina, of Agram, for a group of fresh-water snails resembling *Bithynia* in shape, but having a paucispiral operculum and a thickened, expanded lip, behind which there is a rounded ridge or wave. The species inhabit Dalmatia and the adjacent region around the head of the Adriatic Sea. The commonest and typical species is *E. patula* (Brumati).

Several species found in the state of San Luis Potosi by Mr. Hinkley are so close to *Emmericia* in conchological characters that I do not feel justified in separating them generically from that group,

though when the soft parts and operculum come to hand it is quite possible that the Mexican snails may prove to be generically distinct from the Dalmatian. They differ chiefly by wanting a swelling behind the expanded lip, and for this reason I erect for them the subgenus *Emmericiella*, type *E. novimundi*.

The Oriental group *Tricola* Benson, with a few Indian and Philippine species, resembles *Emmericiella*, but the inner lip is straightened, making the aperture narrow and piriform.

EMMERICIA (EMMERICIELLA) NOVIMUNDI n. sp. Pl. 5, figs. 9, 10.

The shell is imperforate but openly rimate, rather solid, ovate-conic, smooth and glossy. The spire is straightly conic, apex obtuse, the tip being depressed. Whorls $4\frac{1}{2}$, convex, separated by rather deep sutures; last whorl well rounded, ascending to the aperture. The aperture is oblong, vertical, or has the basal lip a little advanced. Peristome continuous, well expanded, thickened on the face and within; the outer lip is just perceptibly retracted near the upper insertion; basal margin well rounded; columella concave, thick. Parietal callus heavy, adnate, but with distinct edge in fully adult shells, spreading forward in front of the aperture. Length 3.1, diam. 1.9 mm.; longest axis of aperture, including peristome 1.65 mm. (fig. 10).

Bank of Choy River near the cave, State of San Luis Potosi.

The specimens are bleached; color in life unknown. These are two perfect examples of the same size. With these are associated several decidedly larger shells, in which the apex is broken, probably one whorl being lost. One of these—figured in profile, fig. 9—measures, length 3.5, aperture 1.9 mm., 4 whorls remaining.

EMMERICIA (EMMERICIELLA) LONGA n. sp. Pl. 5, figs. 11, 12.

The shell resembles *E. novimundi* but is more shortly rimate, of a turritid shape, with $5\frac{1}{3}$ more convex whorls. Aperture is more produced forward below, and the parietal callus spreads forward less. The outer and basal margins are well expanded. Length 4.1, diam. 2, longest axis of aperture including lip 1.6 mm.

Two complete and one broken specimen, found with the preceding species.

The new subgenus EMMERICIELLA is proposed for American *Emmericia*, in which there is no wave or ridge behind the lip-expansion, and the columellar margin of the aperture is built forward

more than in European forms, forming a conspicuously rimate umbilical region. Type *E. novimundi*.

PTERIDES, n. gen.

The shell is minute, rimate, long and narrow, composed of many convex whorls, (7 to 10 in known species); apex obtuse, the first whorl large. Aperture small, diagonal, elliptical, the peristome thin, continuous, expanded throughout or at the ends, where it is retracted to form shallow spout-like sinuses. Operculum and soft parts unknown. Type *P. pterostoma*.

These remarkable little snails are without relatives among known American genera. They may be compared only with a genus found about forty years ago in the flood-débris of the rivers of southern France and Spain, and described by Bourguignat under the generic name *PALADILHIA*,¹ and with another group, *LARTETIA*,² described from quaternary fossils found around Paris, but now known to inhabit subterranean waters and springs of central Europe, where most of the German species have been described as *Vitrella* Clessin.

Both *Paladilhia* and *Lartetia* are small, slender shells with the aperture ovate, the outer lip bending forward below, retracted near the upper insertion. In *Paladilhia* there is a rather narrow, Pleurotomoid notch above, leaving a sort of indistinct sinus-band; in *Lartetia* there is only a broad, rounded sinus. In my opinion the two groups are not generically distinct, *Lartetia* being at most a subgenus of *Paladilhia*.³

These forms, and especially the *Lartetia*, are apparently the nearest allies of the Mexican *Pterides*, which differs from them chiefly by the diagonal, oblong aperture with broadly expanding lip.

¹ *Paladilhia* Bourguignat, Monographie du Genre Palad., 1865. The type, *P. pleurotoma* Bgt., is a snail measuring 4x2 mm., found in the drift débris of the Lez, a little river near Montpellier, dept. de l'Hérault, and believed to inhabit subterranean watercourses.

² *Lartetia* Bourguignat, Catalogue des Mollusques terrestres et fluviatiles des environs de Paris a l'époque Quaternaire (in E. Belgrand: Le Seine—1, Le Bassin Parisien aux âges Antéhistoriques), pp. 15, 17 (1869). Type *L. belgrandi* Bgt.

³ The normal forms of the genus are those called *Lartetia*, *Paladilhia* being an extreme development in one or two species only; but the latter name has priority for the genus, having been described in 1865, while *Lartetia* dates from 1869.

PTERIDES PTEROSTOMA n. sp. Pl. 5, figs. 1, 2, 5, 6.

The shell is rimate, long and slender, composed of numerous slowly increasing, strongly convex whorls. Apex obtuse. Aperture diagonal, obliquely oval. Peristome thin, continuous, very broadly expanded, retracted and more broadly spreading at the two ends, where it is somewhat spout-like. Color unknown, the specimens being bleached.

Length 2.25, diam. of last whorl above aperture .75 mm.; longest axis of aperture 1.1 mm.; whorls 7 (figs. 5, 6).

Length 2.75, diam. above aperture .8, longest axis of aperture 1.2 mm.; whorls $8\frac{1}{2}$ (figs. 1, 2).

Eight specimens examined. There is considerable variation in length and number of whorls. Figs. 5, 6 represent the type.

PTERIDES RHABDUS n. sp. Pl. 5, figs. 3, 4.

The shell is very slender, slowly tapering to the rather large summit, composed of nearly 10 very convex whorls separated by a deep suture; last whorl very convex. Aperture small, elliptical, diagonal, rounded at both ends. Peristome thin, continuous, somewhat expanded, deeply sinused above, the parietal margin adnate for a short distance. Length 3, diam. above aperture .75, longest axis of aperture .7 mm.

Choy River near the cave, San Luis Potosi, Mexico.

This species is much narrower than *P. pterostoma*, with more whorls and a smaller aperture. The outer lip may perhaps become more expanded with further growth; if so it would apparently be like that of *P. pterostoma*. Described from a single specimen. While it may possibly prove to be an extreme form of *P. pterostoma*, I do not feel justified in uniting such unlike forms without evidence of intergradation.

PTERIDES BISINULABRIS n. sp. Pl. 5, figs. 7, 8.

The shell is very slender, slowly tapering from the very obtuse apex, composed of 8 smooth, strongly convex whorls, the last half of the last whorl free from the preceding. Aperture diagonal, elliptical, the peristome continuous, free, thin, hardly expanding except at the two ends, where it is retracted, slightly produced and flaring. The outer margin is arched a little more than the inner. Length 2.5, diam. above aperture .7, longest axis of the aperture .65 mm.

Gannina River, three miles S.-W. of San Dieguito, State of San Luis Potosi. A single specimen taken.

Smaller than *P. pterostoma* with the last whorl free, the aperture sinused at both ends, and the lip hardly expanded.

DESCRIPTIONS OF TWO NEW CUBAN LAND SHELLS.

BY DR. CARLOS DE LA TORRE, HAVANA, CUBA.

MACROCERAMUS HENDERSONI n. sp. Pl. 4, fig. 5.

The shell is perforate, conic-turritid, thin, the last 5 whorls corneous-brown, profusely and finely mottled with opaque white, with a series of irregular, lengthened brown spots at the periphery, showing above the suture on the spire; first $2\frac{1}{2}$ whorls blackish-brown, the next two dark, broadly maculate with white. Surface glossy, the first 4 whorls smooth, the rest closely and finely striate, the striæ low, as wide as their intervals, and very oblique. The spire is straightly conic, apex rather acute. Whorls 11, slightly convex, separated by a smooth suture, the last whorl well rounded peripherally and beneath. Aperture very oblique, ovate, marked with brown inside. Peristome expanded and reflexed, yellow or pale red. Columella brown, short, dilated, and having a rather strong but short fold above. Parietal callus transparent. The internal axis is slender and distinctly twisted spirally.

Length 19, diam. 9.5, length of aperture 8 mm.

Length 20, diam. 9.8, length of aperture 8 mm.

Length 18, diam. 9.5, length of aperture 8 mm.

Sierra de Cubitas, Camaguey, Cuba.

This species is very distinct from all others now known, differing from the *canimarensis* group by the total absence of a basal carina, and from the forms prevalent in Eastern Cuba by its thin texture, sculpture and coloration. It is one of the largest and finest of the Cuban species.

The coloration is very well shown in the figure. Besides the profuse and fine mottling with white there are occasional longitudinal white flames, bordered on the left side with dark, unmarked spaces.

CHONDROPOMA HENDERSONI n. sp. Pl. 4, fig. 6.

The shell is umbilicate, conic-turrite, narrowly truncate, rather solid. Last four whorls rather closely and subregularly marked